Novel Radiation Hard
CVD Diamond Detectors for Hadron Physics

News from
I3HP and I3HP2

NoRHDia

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Status I3 Hadron Physics

- Last year of FP6 ⇒ 2008
- Final reports preparation ⇒ Input Deadline November 15, 2008
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1. Growth processes  IMPROVED  
   (talks Saclay / Limburg)
2. Time resolution  EXCELLENT  
   (talks FOPI / HADES)  HI < 30 ps, MIP ~ 100ps
3. Rate Capability  EXCELLENT; 10^7 - 10^9 pps  
   (talks Uni Karlsruhe / GSI)
4. Energy resolution, A<40  SIMILAR to Si: \(\Delta E/E \sim 0.3\%\)
5. Energy resolution, A>40  as MUSIC’s: \(\Delta E/E \sim 1\%\) (!)
6. Radiation Hardness  ENCOURAGING  NOT COMPLETED  
   Tested up to 10^{16} p,n/cm^2  
   (talks Uni Karlsruhe / GSI)

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Status NoRHDia

$^{134}$Xe Fragments, 740AMeV

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Diamond
Relativistic ions:
E-resolution superior to Silicon, and similar to MUSIC chambers!
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Evaluation of the I3HP Scientific Advisory Committee

- VERY POSITIVE

The Joint Research Activity 11 ....

- has made substantial advances essential for the next generation of particle and nuclear physics experiments.
- ... a promising potential replacement for the traditional silicon detectors.
- Most interestingly, their radiation hardness .....
The HadronPhysics2 Proposal has been successfully submitted to the European Commission on 26/02/2008.

You may find the Proposal in our web site: http://www.hadronphysics2.eu

Evaluation results were expected by the mid of May 2008. However, we are still waiting for ....